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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/402,796	12/22/99	DUPUIS C	

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FINNEGAN HENDERSON FARABOW
GARRETT & DUNNER
1300 I STREET NW
WASHINGTON DC 20005

EXAMINER	
WELLS,	

ART UNIT	PAPER NUMBER
	11

DATE MAILED: 05/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/402,796	DUPUIS, CHRISTINE	
	Examiner	Art Unit	
	Lauren Q Wells	1619	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

Response to Arguments

Applicant's arguments filed March 28, 2001 have been fully considered but they are not persuasive. Applicant argues "Dupuis et al. does not teach a cosmetic composition comprising at least one nonionic amphiphilic associative polyurethane corresponding to a formula wherein the R and R' are different and defined such that one is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons". This argument is not persuasive, as Dupuis et al. teach a nonionic amphiphilic associative polyurethane wherein R and R' can be identical or different and are C8-C18 hydrocarbon radicals (it is noted that the term "alkyl" and the term "hydrocarbon" are synonymous). An alkyl group comprising 6 carbons is homologous to one comprising 8 carbons. The CCPA has defined a homologous series as a family of chemically related compounds, the composition of which varies from member to member by CH2 (one atom of carbon and two atoms of hydrogen) *In re Coes, Jr.* (CCPA 1949) 173 F2d 1012, 81 USPQ 369. The Court of Appeals for the District of Columbia applied a broader definition and defined a homolog (or homologue) as a member of a series of compounds in which each member differs from the next member by a constant number of atoms. *Comr. Pats. V. Deutsche Gold-und-Silber, etc.* (CADC 1968) 397 F2d 656, 157 USPQ 549.

The "Hass-Henze Doctrine" evolved from three CCPA cases, viz., *In re Hass et al.* (CCPA 1944) 141 F2d 122, 127, 60 USPQ 544, 548; and *In re Henze* (CCPA 1950) 181 F2d 196, 85 USPQ 261. In the *Henze* decision, the Court said:

> [T]he nature of homologues and the close relationship the physical and chemical properties of one member of a series bears to adjacent members is such that a

presumption of unpatentability arises against a claim directed to a composition of matter, the adjacent homologue of which is old in the art. The burden is on the applicant to rebut that presumption by a showing that the claimed compound possesses unobvious or unexpected beneficial properties not actually possessed by the prior art homologue. It is immaterial that he prior art homologue may not be recognized or known to be useful for the same purpose or to possess the same properties as the claimed compound.

The Court concluded that because the characteristics normally possessed by members of a homologous series are principally the same, varying gradually from member to member, chemists knowing the properties of one member of a series would in general know what to expect in adjacent members so that a mere difference in degree is not the marked superiority which will ordinarily remove the unpatentability of adjacent homologues of old substances. Contra, where no use for the prior art compound is known. *In re Stemniski* (CCPA 1971) 444 F2d 581, 170 USPQ 343, and cases cited therein.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1) Claims 1-37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 6,080,392. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed toward analogous hair compositions comprising, in a cosmetically acceptable medium, at least one associative polyurethane polymer, and at least one anionic polymer.

2) Claims 1-37 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 09265850, Application No. 09402801, and Application No. 09402797. Although the conflicting claims are not identical, they are not patentably distinct from each other because all sets of claims are directed toward analogous hair compositions comprising, in a cosmetically acceptable medium, at least one associative polyurethane polymer, and at least one anionic polymer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(i) The phrase "derived from" in claims 22, 26, 28 is vague and indefinite, as the phrase is not sufficiently defined in the specification and one of ordinary skill in the art would not be appraised of it. Thus, the metes and bounds of the claims are unascertainable.

(ii) Claims 23-25, 27, and 29 are rejected for the use of improper Markush groups. See MPEP 2173.05(h) for examples of proper conventional or alternative Markush-type language (e.g. ". . .selected from the group consisting of. . .and. . .").

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 16-19, 21-23, 25-29, 35, 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Dupuis et al (6,080,392); USPTO-892 dated 10/26/00.

Dupuis et al. teach (Col. 1, lines 60-63) a cosmetic composition comprising, in a cosmetically acceptable aqueous medium, at least one associative polyurethane and at least one anionic polymer. Dupuis et al. teach (Col. 4, lines 58-64; Col. 5, lines 1-3) formula (I), where R_1 and R_2 may be identical or different and are C_8-C_{18} hydrocarbon radicals, where R_3 is a C_7-C_{36} hydrocarbon radical, where "a" is 90 to 600, and where "b" is 1-4. Additionally, Dupuis et al. teach (Col. 5, lines 13-15) anionic polymers generally used as polymers containing groups derived from carboxylic, sulphonic, or phosphoric acid. Additionally, Dupuis et al. teach (Col.

5, lines 37-39) preferred anionic polymers containing carboxylic groups as homo- or copolymers of acrylic or methacrylic acid with a monoethylenic monomer such as ethylene, styrene, vinyl esters or acrylic or methacrylic acid esters, optionally grafted onto a polyalkylene glycol. Additionally, Dupuis et al. teach (Col. 5, lines 65-67) that these copolymers can be made of the copolymers of acrylic acid and C_1-C_4 alkyl methacrylate and the terpolymers of vinylpyrrolidone, acrylic acid, and methacrylate of C_1-C_{20} alkyl, such as ®Acrylidone LM. Additionally, Dupuis et al. teach (Col. 6, line 4) preferred anionic polymers containing carboxylic groups of crotonic acid, such as those containing in their chain vinyl acetate or propionate units and allylic and optionally other monomers such as methallylic esters, vinyl ether or vinyl ester of a linear or branched saturated carboxylic acid containing a long hydrocarbon chain, specifically ®National Starch. Additionally, Dupuis et al. teach (Col. 6, line 20) preferred anionic polymers containing carboxylic groups of polymers derived from maleic, fumaric, or itaconic acid. Additionally, Dupuis et al. teach (Col. 6, lines 29-35) preferred anionic polymers as polymers of maleic and itaconic anhydride and of an allylic or methallylic ester optionally containing an acrylamide or methacrylamide group, an α-olefin, acrylic or methacrylic esters, acrylic or methacrylic acid or vinylpyrrolidone in their chain. Additionally, Dupuis et al. teach (Col. 6, lines 40-42) anionic polymers comprising sulphonic groups such as vinylsulphonic or styrenesulphonic acid. Additionally, Dupuis et al. teach (Col. 7, lines 34-37) associative polyurethane as present in proportions ranging from 0.01% to 5%, preferably from 0.05% to 3% by weight. Additionally, Dupuis et al. teach (Col. 7, lines 38-42) anionic polymers as present in proportions ranging from 0.1% to 20%, preferably from 0.5% to 8% by weight. Additionally, Dupuis et al. teach (Col. 7, lines 43-47) a mixture of water and a cosmetically acceptable solvent such as glycol ethers as a

cosmetically acceptable medium. Additionally Dupuis et al. teach (Col. 7, lines 64-67) gums as a further ingredient of the composition. Gums and glycol ethers are modified soluble starches. Furthermore, Dupuis et al. teach (Col. 8, lines 24-29) a process for the cosmetic treatment of keratin substances, such as the hair, characterized in that it comprises applying a cosmetic composition to the keratin substance and then in optionally rinsing with water, or in optionally leaving the cosmetic composition to stand on the keratin substances for a certain period of time. Furthermore, Dupuis et al. teach (Col. 8, lines37-29) the cosmetic composition as a leave-in composition.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

4. Claims 20, 24, 30-34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupius et al. in view of Cauwet et al. (5,478,562) and Prencipe et al. (5,385,729), in further view of Carey; USPTO-892 dated 10/26/00.

Dupius et al. is disclosed as discussed above.

Prencipe et al. teach a personal care composition in the form of a hair or skin treating gel containing a synthetic linearly viscoelastic cross-linked polymeric thickening agent. Prencipe et al. teach (Col. 5, lines 64-68 and Col. 6, lines 1 and 17) a preferred embodiment of the cross-linked polymer in which the polymer contains repeating units of one or more phosphoric acid groups bonded to one or more carbon atoms in the polymer chains. Prencipe et al. teach examples of such phosphoric acid units as vinyl phosphoric acid and styrene phosphoric acid.

Cauwet et al. teach a cosmetic composition for hair and skin washing containing at least one surface-active agent of the alkyl polyglycoside and/or polyglycerolated type and at least one polyetherurethane. Cauwet et al. teach (Col. 1, lines 17-18) that polyetherurethanes are known thickeners for compositions containing surface-active agents.

While Dupuis et al. do not teach all of the claim designated weight percentages or ratios of the nonionic amphiphilic polyurethane to anionic polymer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the weight ratios because it is within the skill of the artisan to substitute various ratios to produce the most stable composition such that the hair product does not liquefy rapidly or disappear rapidly, thus allowing the composition to redistribute on the hair and/or allow it to penetrate into the hair and scalp as taught by Dupuis et al.

While Dupuis et al. do not teach specific phosphoric acids, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted vinyl phosphonic acid or stryrene phosphonic acid as taught by Prencipe et al. for the phosphonic acids taught by Dupuis et al. because Prencipe et al. teach that phosphonic polymers are needed for cross-links with polymeric thickening agents so that the cosmetic composition has excellent stability against phase separation, viscosity changes in storage, and an excellent texture. While Dupuis et al. do not teach specific ratios of nonionic amphiphilic polyurethane to anionic polymer as a process for thickening a cosmetic composition it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the ratios of nonionic to anionic polymers to thicken the composition because Cauwet et al. teach the importance of producing compositions in the form of liquids, gels, emulsions, lotions,

dispersions, or aerosol foams that are thickened. It would have been obvious to one of ordinary skill in the art that a wide variety of alkyl groups, such as octadecyl and methyl, could have been obtained by condensation reactions, such as polycondensation of hexamethylene diisoccyante and polyethylene glycol, because Carey teaches that condensation reactions are inherently known to give a product accompanied by the expulsion of a stable molecule when two molecules are combined.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lauren Q Wells whose telephone number is (703) 305-1878. The examiner can normally be reached on M-F (7-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diana L Dudash can be reached on (703) 308-2328. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4556 for regular communications and (703) 308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.

CAMERON L. JONES
PRIMARY EXAMINER
5/1/01

lqw
April 25, 2001